

REMARKS

Claims 1, 3-15, and 17-26 are pending in the present application.

At the outset, Applicants wish to thank Examiner Haq for recognizing the Claims 2-14 are free from the art of record. Reconsideration of the outstanding rejections is requested in view of the following.

The rejection of Claims 1-26 under 35 U.S.C. §112, second paragraph, is obviated in part by amendment and traversed in part.

With respect to items 6 on page 2 of the outstanding Office Action, Applicants disagree with the Examiner's allegation that this term "silylated organic compound" is indefinite for the reasons already of record. Nonetheless, to avoid any needless delay, Applicants have amended the claims to define the this term in Claims 1 and 15 as set forth in Claims 2 and 16, respectively. As such, this point of criticism is believed to be moot.

In item 7 of the outstanding Office Action, the Examiner alleges that Claim 1 has omitted an essential step. The step that the Examiner alleges is missing is a "detecting and/or measuring step for the appearance of desilylated organic compound or disappearance of silylated organic compound." However, Applicants respectfully direct the Examiner's attention to the second step in Claim 1, which already recite the allegedly missing language. Applicants note that the Examiner has not provided any substantive response to Applicants prior traversal of this rejection, but rather has merely restated the rejection. The Examiner is reminded that MPEP §707.07(f) requires that "Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." Therefore, it is submitted that Claim 1 has not omitted an

essential step and that the procedural guidelines for making this rejection have not been satisfied.

In maintaining the rejection in item 8, the Examiner alleges that “the claims is a composition claim and it is unclear how this term “means for detection” fits in the component of this composition claims. The components of a composition claims should be clearly stated to make the claim definite.” First, Applicants wish to direct the Examiner’s attention to the fact that Claim 15 is not a composition claim. Claim 15 is drawn to a *kit* for detecting and/or measuring the concentration of fluoride (F<sup>-</sup>) or hydrogen fluoride (HF) in a sample. The components of the kit are clearly defined as being:

(a) a silylated organic compound which is desilylated when it is in the presence of fluorine or hydrofluoric acid; and

(b) a means for detecting, in aqueous solution, the appearance of the desilylated organic compound or the disappearance of the silylated organic compound.

Thus, the components of the kit claim (Claim 15) are clearly stated. Further, with respect to item 8 in the outstanding Office Action, Applicants submit that the term “means for detecting” is perfectly clear and readily understood to the skilled artisan. This is especially true when the claims are read in view of the specification. The Examiner’s attention is directed to MPEP §2173.02, which states:

Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

Applicants submit that the artisan would readily understand the meaning of the term “means for detecting” by referring to page 3, line 34 to page 4, line 18, page 25, line 32 to

page 26, line 10, as well as the remaining description of the present application, and the Examples therein.

In view of the foregoing, withdrawal of this ground of rejection is requested.

The rejection of Claim 1 under 35 U.S.C. §112, first paragraph (enablement), is obviated by amendment.

Applicants disagree with this ground of rejection for the reasons already of record. Nonetheless, to avoid any needless delay, Applicants have amended Claim 1 to define the term “silylated organic compound” as set forth in Claim 2, which the Examiner recognizes as being enabled. As such, this point of criticism is believed to be moot.

Withdrawal of this ground of rejection is requested.

The rejections of: (a) Claim 1 under 35 U.S.C. §102(b) over Descalzo et al, and (b) Claim 15 under 35 U.S.C. §103(a) over Descalzo et al, are respectfully traversed.

The Examiner alleges that Claims 1 and 15 are not novel in view of the disclosure of Descalzo et al. In making this rejection, the Examiner states that silylated organic compounds are disclosed in said document (on line 1 of page 563). Applicants disagree with this ground of rejection on the reasoning therein for the reasons already of record, which are restated and further augmented below. Nonetheless, Applicants note that Claims 1 and 15 has been amended to define the term “silylated organic compound” as set forth in Claims 2 and 16, respectively, which the Examiner recognizes as being free from the disclosure of Descalzo et al. As such, this ground of rejection is believed to be moot. Nonetheless, Applicants make the following comments:

Descalzo et al discloses a method for a fluoride determination in water based on the specific reaction of fluorhydric acid with a MCM-41 solid matrix (mesoporous silica solid matrix) functionalized with fluorescent or coloimetric signaling units. The mesoporous MCM-41 can be first functionalized with 3-aminopropyltriethoxysilane in refluxing toluene, this amino functionalized solid is then reacted with a) 9-anthraldehyde; b) lissamine rhodamine  $\beta$  sulfonyl chloride and c) 4-{2-[4-(dimethylamino)phenyl]diazeryl}benzoic acid, thus giving functionalized solids S1, S2, and S3 (see scheme 1).

However, Descalzo et al does not disclose nor suggest the claimed method wherein a silylated *organic* compound is used *in solution* for detecting and/or measuring the concentration of fluoride or hydrogen fluoride in a sample.

As shown in Table 1 of Descalzo et al, the analysis is based on the reaction of fluoride with functionalized *solids* S1, S2 and S3 (see Scheme 1) which are essentially mineral compounds and *not* organic compounds as the silylated organic compounds of claim 1.

Moreover, the functionalized solids of Descalzo et al *are not in solution* as demonstrated on page 562, right column, third paragraph, said solid are in *suspension* and not in solution. Moreover, as mentioned on page 562, right column, 11<sup>th</sup> line from the bottom "Functionalized *solids* S1, S2 and S3 can also be obtained in a monolithic conformation" clearly such solids cannot be in solution.

From the foregoing, Applicants submit that Descalzo et al do not disclose or suggest the claimed method wherein a silylated *organic* compound is used *in solution* for detecting and/or measuring the concentration of fluoride or hydrogen fluoride in a sample. Further, in Descalzo et al the functionalized solids S1, S2 and S3 are in *suspension* and not *in solution* and are even used in a "*monolithic* conformation".

- The compounds of Descalzo et al are essentially *mineral compounds* and not *organic* compounds as the silylated compounds now clearly defined in claim 1 by

incorporation in said claim of the formula of original claim 2.

- Said *mineral* compounds are used in suspension, not in *solution*, and may be even used in a *monolithic* conformation.

The Examiner's allegations on the record are contradictory and confusing. The Examiner assert "Descalzo et al disclose reaction of silylated organic compound with fluoride sample in *solution*. A *suspension* of silylated..." This allegation and the conclusion drawn therefrom finds no support in Webster's dictionary as alleged. In fact, Applicants submit that a homogeneous mixture is not compulsorily a solution as alleged. In Descalzo et al the term "homogeneity" on page 562, right column, third paragraph is used to define a *suspension* (dispersion) including *solid* particles : "the mixture was then sonicated for 10 min to *disperse* the particles of the *solid* and obtain the maximum homogeneity possible in the *suspension*".

Applicants submit that every artisan (i.e., a chemist) with even a elementary education would appreciate that a *suspension* is quite different from a *solution*. For the Examiner's reference, Applicants **submit herewith** the definition of a "suspension" given in the WEBSTER dictionary. From which it is clear that in a suspension the particles are mixed with but not dissolved in, for example, a liquid. This is precisely the case in Descalzo et al.

In view of the foregoing, withdrawal of these grounds of rejection is requested.

The rejections of Claims 15-26 under 35 U.S.C. §103(a) over Salari et al or Tallent et al are respectfully traversed.

The Examiner alleges that Claims 15 to 26 are obvious in view of Salari et al or Tallent et al. Applicants disagree and note that there is absolutely no suggestion in these references to combine in a kit a silylated organic compound and detection means for detecting in aqueous solution, the appearance of the desilylated organic compound or the disappearance of the silylated organic compound. For example, in Tallent et al a first

silylated compound (bis(tri-methylsilyl acetanide) is used to silylate lipolysates (thus giving a second silylated compounds) for GLC. Thus, clearly in Tallent et al the measuring means (GLC) are used to detect the appearance of a silylated compound and not the appearance of a desilylated compound or the disappearance of a silylated compound as in the kit of the present invention (claim 15).

In maintaining this ground of rejection, the Examiner appears to allege that the language "appearance of the desilylated organic compound or the disappearance of the silylated organic compound" amounts to an intended use limitation. Clearly, from the plain language of the claims, this allegation is incorrect. Instead, the language "in aqueous solution, the appearance of the desilylated organic compound or the disappearance of the silylated organic compound" clearly defines the "means for detecting." Suitable means falling within the scope of this definition would be appreciated by the artisan by reference to page 25, line 32 to page 26, line 10, which states:

The means for detecting and/or measuring the appearance of the desilylated organic compound, or the disappearance of the silylated organic compound, in aqueous solution naturally depends on the detection and/or measurement method which is used for implementing the method of the invention. The methods which can be used are as defined above. The detection and/or measurement means can therefore comprise one or more of the following components: colored indicators, markers such as those mentioned above, enzymes, measurement means such as those mentioned above, antibodies which are required for detecting and/or measuring the silylated and/or unsilylated organic compound(s), etc.

Again, it is noted that Salari et al and Tallent et al fail to disclose or suggest such a means as Tallent et al discloses a measuring means (GLC) that is used to detect the appearance of a silylated compound and not the appearance of a desilylated compound or the disappearance of a silylated compound as in the kit of the present invention (claim 15).

In view of the silence of Salari et al and Tallent et al of the kit of the present invention, Applicants request that these grounds of rejection be withdrawn.

Applicants submit that the present application is in condition for allowance. Early notification to this effect is respectfully requested.

Respectfully submitted,

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